

REMARKS

Applicant acknowledges that Claims 36-39, 41, 42 and 45 and 46 have been withdrawn from consideration on the ground that they are drawn to a non-elected invention. Accordingly, the latter claims have been cancelled, without prejudice to, or disclaimer of the subject matter thereof, and without prejudice to Applicant's right to resubmit those claims in a divisional application.

In response to the objection to the declaration, Applicant has submitted herewith a Supplemental Application Data Sheet, showing the inventor's city and state or foreign country of residence.

In response to the objections to the drawings, proposed drawing corrections have been submitted for Figures 4, 5 and 6. In this regard, Applicant notes that the substitute specification at page 20, line 7 correctly refers to the reference numerals thus incorporated into Figure 4. For the reasons indicated hereinbelow, Applicant believes that the substitute specification is entitled to be entered, so that the numbering in the specification conforms with that of the drawings.

In paragraph 10 of the Office Action, the substitute specification submitted on January 22, 2002 has been denied entry on the ground that it fails to include a

statement as to lack of new matter, as required by 37 C.F.R. §1.125(b). However, Applicant notes in this regard that the transmittal document by which the substitute specification was submitted ("Submission of Substitute Specification") dated January 22, 2002 states as follows: *"I certify that said substitute specification contains no new matter and includes the changes indicated in the marked-up copy of the original specification."* Accordingly, Applicant respectfully submits that the substitute specification fully complies with all requirements of 37 C.F.R. §1.125(b), and requests that it be entered. The entry of such substitute specification should resolve the minor errors referred to in paragraph 11 of the Office Action. Moreover, the substitute specification has also been revised to correct the matters set forth in paragraph 12 of the Office Action. Finally, the Abstract of the Disclosure has been revised in the manner suggested by the Examiner, and is attached hereto as a separate page, as required.

Claims 23-35 have been rejected under 35 U.S.C. §112, second paragraph, and have been objected to, based on certain formal issues identified by the Examiner in paragraphs 17-19 of the Office Action. In response to these grounds of rejection and objection, Applicant has amended the claims in a manner which addresses and is believed to resolve each of the formal issues cited by the Examiner. Accordingly, Applicant respectfully requests that these grounds of objection and rejection be withdrawn.

Claims 23-26, 30-32, 40, 43 and 44 have been rejected under 35 U.S.C. §102(a) as unpatentable over Sato et al (U.S. Patent No. 5,926,294) in view of McGrew (U.S. Patent No. 5,138,471). In addition, Claim 27 has been rejected as unpatentable over Sato et al in view of McGrew, and further in view of Sukhman (U.S. Patent No. 4,338,578); Claims 28 and 29 have been rejected as unpatentable over Sato et al in view of McGrew and further in view of Gnädig et al (German patent document DE 197 00 162 A1). Finally, Claims 33 and 34 have been rejected as unpatentable over Sato et al in view of McGrew and further in view of Arns et al (U.S. Patent No. 4,456,328); and Claim 35 has been rejected as unpatentable over the same two references and further in view of Hariharan (*Optical Holography, etc.*). However, for the reasons set forth hereinafter, Applicant respectfully submits that all claims remaining of record in this application distinguish over the cited references, whether considered separately or in combination.

Sato et al is related to a three-dimensional image display device for displaying a three-dimensional image of an object. To achieve this, a screen panel is composed of a plurality of elemental holograms forming point-images in a way that the composition of the point images represents a three-dimensional image when the elementary holograms are reproduced. (See Abstract and Column 4, lines 17-27 and Column 5, lines 51-55.)

In order to prepare a screen comprising the elementary holograms, a single point-image 52 of a diffusing plate 51 is projected onto the whole surface of a light-sensitive material 43 forming the screen. The light emanates from the point 52 in a divergent manner and falls through a mask 54 to form a number of elementary holograms of said single point-image 52 at different predetermined locations of the screen. Then, the screen is moved to form a second number of holograms of said single point image 52 at second predetermined locations of the screen. (See Column 15, line 7 to Column 16, line 2.)

During operation of the device, when the screen is illuminated, the elementary holograms being distributed over the screen, reproduce the single point 52 at the location relative to the screen, where it was during the exposure of the plurality of elementary holograms distributed over the screen. (See Column 16, line 36 to Column 17, line 29.) Thus, a three-dimensional image can be displayed in space by exactly illuminating well-defined elemental holograms distributed over the whole surface of the screen.

In contrast thereto, the present invention is related to a video screen hologram being a holographic image of a real video screen. These video screen holograms can be used like normal projection screens, however, with the advantage, that they provide

a much better contrast and a much higher brightness. According to the invention, such a holographic projection screen is produced by illuminating a real video screen with narrow-band light to generate a hologram of the real video screen. A plurality of individual recordings is made by illuminating small portions of the real video screen, so that a video screen of the entire video screen is obtained by a composition of the individual recordings, wherein illumination of the video screen is performed using a scanning pulsed laser beam which is guided over the video screen.

Sato et al does not show a video screen hologram as a holographic image of the real video screen. Instead, it shows a screen composed of elementary holographs being holographic images of a single point at a predetermined location in the three-dimensional space. Further, Sato et al does not show that a real video screen is illuminated by narrow-band light to generate a hologram of the real video screen, wherein a plurality of individual recordings is made by illuminating small portions of the real video screen so that a video screen hologram of the entire video screen is obtained by a composition of the individual recordings. Instead, Sato et al discloses the production of elementary holograms of only one single point of the diffusing plate 51 so that a composition of the individual recordings does not lead to a video screen hologram of the entire video screen, but to a screen with holograms of said single point which reproduce said single point at a fixed location in space when the screen is illuminated. Furthermore, Sato et al does not show the use of a scanning pulsed laser

beam being guided over the video screen to illuminate the video screen. Instead, Sato et al has to move the film 43 in order to achieve different relative positions of the point 52 with respect to the film 43 during illumination.

If the skilled person would use a scanning pulsed laser beam, as taught by McGrew (U.S. Patent No. 5,138,471), in the method of Sato et al, he would not get a proper result since the position of point 52 with respect to the film 53 with its divergent light beam would not be defined. If the skilled person would like to replace the raster scanning movement of the holographic substrate and medium, as suggested on page 8, lines 1 and 2, he would have to move the complete arrangement of mirror 48, lens 49 and plate 51 in order to achieve a proper functioning device.

In addition to the above, none of the other citations teaches or discloses a method of producing a video screen hologram as a holographic image of a real video screen by scanning a real video screen with a pulsed laser beam in order to illuminate a plurality of small portions of said real video screen so that a video screen hologram of the entire video screen is obtained.

Accordingly, in view of the foregoing fundamental differences in the Sato et al apparatus, as noted above, Applicant respectfully submits that all claims of record

distinguish over the combination of Sato et al with the various teaching references referred to in the Office Action.

In light of the foregoing remarks, this application should be in condition for allowance, and early passage of this case to issue is respectfully requested. If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #056226.50815).

Respectfully submitted,



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